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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,115	10/29/2003	Alexander C. Loui	78311DMW	6929

7590 02/21/2007	
Thomas H. Close	**EXAMINER**
Patent Legal Staff	BITAR, NANCY
Eastman Kodak Company	
343 State Street	**ART UNIT** **PAPER NUMBER**
Rochester, NY 14650-2201	2624

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _1_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _12 February 2007_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-10_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-10_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _17 November 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☒ All   b)☐ Some * c)☐ None of:

       1.☒ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Remarks

1. The remark filed on February 12,2007 has been entered and considered by
examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that
form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public
use or on sale in this country, more than one year prior to the date of application for patent in the United
States.

3. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by

Loui et al. (EP 0990996).

As to independent claim 1, Loui et al. discloses a method for obtaining and

automatically classifying images into events, the method comprising the steps of:

(a) providing a group of images from a digital source (digitized images are input

into the computer system, see paragraph [0013]), wherein images are in chronological

order and lack other date and time information (the image will first be ranked S10 in

chronological order, see paragraph [0013]);

(b) clustering the images into smaller groups based on chronological image

similarity of nearby images (the contents of the images are analyzed S20 for

determining whether images closest in time to an adjacent event should be maintained

in the event as defined by the clustering analysis, see paragraph [0013]) by computing

histograms of the images and comparing histogram intersection values obtained

therefrom with one or more thresholds (a histogram of the entire image of both images

is computed S50, a global histogram. A comparison of the two histograms is performed

by histogram intersection value S60, see paragraph [0024], note that if the intersection

is under a threshold S65, preferably 0.34, although other thresholds may be used, the

images are different. If the threshold is met or exceeded S65, then a block-based

histogram correlation will be performed S70, see paragraph [0024]) whereby the

clustering based on chronological image similarity is done in at least one stage by

comparing each image with its direct neighboring images in said chronological order

(within each segment adjacent pictures are compared, see paragraph [0020]) and

(c) evaluating the clustered images against a final condition (histogram correlator

S30 for analyzing the content, see paragraph [0014]) related to at least one of a

predetermined group maximum for the number of smaller groups (block-based

histogram technique may produce five subject groupings (for example groups 1-5) from

the one event i, as illustrated in the drawing, figure 6) and a predetermined maximum

number of isolated pictures (for example group 2, 3, and 5, figure 6), whereby the

smaller groups are classified as events if the final condition is met (single image groups

can be better arranged within the event grouping, see paragraph[0023]).

As to dependent claim 2, Loui et al. teaches the method as in claim 1, wherein

the clustering based on chronological image similarity in step (b) is done in at least two

stages (k-means clustering technique, boundary check, see paragraph [0014]) by

comparing each image with its direct neighboring images (i5 with j1, figure 5) and secondly with its second neighboring images (i5 with j2, figure 5).

As to dependent claim 3, Loui et al. teaches the method as in claim 1, wherein step (b) includes clustering the images into smaller groups based on chronological image similarity of nearby images by using a block-based histogram technique (block based histogram correlation used in the above analysis, see paragraph [0024]).

As to dependent claim 4, Loui et al. teaches the method as in claim 3, wherein the block-based histogram technique comprises analyzing the events for content by dividing the images into a plurality of blocks and grouping the images into subject grouping based on block-based histogram correlation which includes computing a color histogram of each block (for each block a color histogram is computed, see paragraph [0024]) and computing a histogram intersection value (the block histograms between the reference image and the candidate image are compared using the histogram intersection equation defined above S80, see paragraph [0025])which determines the similarity between blocks (if the average intersection value is between these two thresholds, the two images are considered similar, see paragraph [0025]) ,thereby refining and improving the overall classification and subject grouping of the events (a refinement and subject re-arrangement analysis S40, see paragraph [0016]).

As to dependent claim 5, Loui et al. teaches the method as in claim 1, whereby if the final conditions are not initially met, further comprising the step of decrementing one or more of the thresholds (the average intersection value will be compared to a low threshold (preferably 0.3555) and a high threshold (preferably 0.557), see paragraph

[0025]) as applicant disclose the value 0.015 is a decrement factor and it is added that

other values may prove workable described in the specification [0057], and iterating

through steps (b) and (c) until the final conditions are met(the above analysis and the

shift can be repeated S120 to check for similarity, see paragraph [0027]).

As to dependent claim 6, Loui et al. teaches the method as in claim 5, wherein

the number of iterations is limited (right, left, up and down, see paragraph [0027], note

that the number of iteration is determined with respect to the shift).

. As to dependent claim 7, Loui et al. teaches the method as in claim 1, wherein

the digital source is a digital camera (the images are either directly input into the

computer system (for example a digital camera, see paragraph [0012]).

As to dependent claim 8, Loui et al. teaches the method as in claim 1, wherein

the digital source is a film scanner for scanning a photographic film (digitized before

input into the computer system (for example scanning (i.e. film scanner), see paragraph

[0012], note that a film scanner is a device made for scanning photographic film directly

into a computer without the use of any intermediate printmaking).

As to dependent claim 9, Loui et al. teaches the method as in claim 1, wherein

the digital source is a CD ROM (see paragraph [0010]).

As to dependent claim 10, Loui et al. teaches the method as in claim 1, wherein

the digital source is one or more image files from a user hard disk (solid state electronic

storage, see paragraph [0010], note that the solid state storage are considered a hard

drive based on high density and uses memory chips instead of rotating platters for data

storage).

Response to Arguments

4. Applicant's arguments filed February 12,2007 have been fully considered but they are not persuasive.

Rejection Under 35 U.S.C. ∋102

As to Deficiencies of Loui- Independent Claim 1, on page 1, applicant argues in page 4 that *"the claimed invention is an improvement on the EP'996 reference which relies on date and time information in classifying a group of images and that every step in the classification technique is dependent on time and date in contrast, the claimed invention is simpler than the reference classifying technique and require less computing power.* It is true that Loui et al teaches classification of images utilizes both date and time information and block based comparison that checks for similarity of subject and background in the images. Moreover, Loui et al clearly states in paragraph [0007] that IF DATE AND TIME INFORMATION IS NOT AVAILABLE, THEN THE BLOCK BASED ANALYSIS MAY BE USED AS THE SOLE BASIS FOR CLASSIFICATION". Examiner disagrees with applicant this point of view because sole basis for classification can rely on no time and date information.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Nancy Bitar whose telephone number is 571-270-1041.

The examiner can normally be reached on Mon-Fri (7:30a.m. to 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Joseph Mancuso can be reached on 571-272-7695. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call·800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nancy Bitar   02/12/2007

JOSEPH MANCUSO
SUPERVISORY PATENT EXAMINER